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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/836,970	04/17/2001	Richard B. Keller	51040.P003	8488

25943 7590 09/20/2005

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EXAMINER	
MEW, KEVIN D	

ART UNIT	PAPER NUMBER
2664	

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/836,970	KELLER ET AL.	
	Examiner	Art Unit	
	Kevin Mew	2664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 23 May 2005.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 2-19 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 2-19 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Detailed Action

Response to Amendment

1. Applicant's arguments/remarks filed on 5/4/2005 have been fully considered and claims 2-19 are currently pending. Claim 1 has been canceled by applicant.

2. Acknowledgement is made of the amended claims 17-18 regarding the claim objections to claims 17-19 cited in the previous Office Action. The corrections are acceptable and the claim objections have been withdrawn.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 2-4, 6, 8-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Bisson et al. (USP 6,349,092).

Regarding claim 9, Bisson discloses a method comprising:

receiving a byte value from a signaling channel (receiving a K3 byte from the APS signaling channel, see col. 3, lines 6-15; APS signaling stands for automatic protection switching signaling, see col. 6, lines 24-25), locating a particular unused byte location within an overhead portion of a synchronous optical network (SONET) frame (locating the fifth row and second

column of the transport overhead of the second STS-1 SONET frame, see col. 3, lines 6-15), wherein locating the particular unused byte location comprises:

switching to an interface buffer (column 2 of transport overhead, see Fig. 7) storing the byte value when the particular unused byte location is available to be written (locating the unused byte location at the fifth row, second column of the second STS-1 signal and fifth row, third column of the third STS-1 signal in the transport overhead of the SONET frame, respectively, see Fig. 7), said interface buffer (column 2 of transport overhead, see Fig. 7) being one of a plurality of interface buffers (columns 1, 2, 3 of transport overhead, see Fig. 7) corresponding to a plurality of signaling channels (row 5 of the transport overhead corresponds to a plurality of signals STS-1, STS-2, STS-3, see Fig. 7), said plurality of interface buffers being switched to match the plurality of signaling channels (STS-1, STS-2, STS-3 signals) to corresponding byte locations at a data rate of a SONET service (each of STS-1 and STS-3 signals corresponds to signals of different line rates, see col. 4, lines 58-67) comprising the SONET frame (STS-3 SONET frame, see col. 7, lines 15-33 and Fig. 7); and

inserting the byte value from the signaling channel (APS channel) into the particular unused byte location (APS channel byte K3 is allocated to the unused byte portions of the transport overhead, col. 3, lines 6-15).

Regarding claim 2, Bisson discloses the method of claim 9 wherein the signaling channel comprises a control channel to define at least one of quality of service, authentication (node identification is expanded from node identification field from four to eight bits, see col. 3, lines 6-15), provisioning, and billing parameters for one or more regional network services trunked to a SONET service comprising the SONET frame.

Regarding claim 3, Bisson discloses the method of claim 9 further comprising:

receiving a plurality of additional byte values from the signaling channel (K1 byte and K2 byte of the APS signaling channel), locating a plurality of additional unused byte locations within the overhead portion of the SONET frame (locating the fifth row, fourth column and fifth row, seventh column of a STS-3 SONET frame respectively, see Fig. 3); and

inserting the plurality of additional byte values into respective ones of the plurality of additional unused byte locations (K1 byte and K2 byte occupying the fifth row, fourth column and fifth row, seventh column of the STS-3 SONET frame respectively, see Fig. 3).

Regarding claim 4, Bisson discloses the method of claim 9 further comprising:

receiving a plurality of additional byte values from a plurality of additional signaling channels (receiving APS channel K1 and K2 bytes from the second STS-1 signal and the third STS-1 signal, see Fig. 7);

locating a plurality of additional unused byte locations within the overhead portion of the SONET frame (locating the fifth row, second column of the second STS-1 signal and fifth row,

third column of the third STS-1 signal in the transport overhead of the SONET frame, respectively, see Fig. 7); and

inserting the plurality of additional byte values from the plurality of additional signaling channels into respective ones of the plurality of additional unused byte locations (APS channel bytes K1 and K2 are allocated to the byte location fifth row, second column and fifth row, third column in the transport overhead, respectively, see Fig. 7).

Regarding claim 6, Bisson discloses the method of claim 9 wherein locating the particular unused byte location is one of a static location procedure and a dynamic location procedure (locating the unused portion is a dynamic procedure because the APS channel K3 byte can be located at other unused byte locations in the transport overhead, see col. 7, lines 23-25).

Regarding claim 8, Bisson discloses the method of claim 9 receiving the byte value comprises:

storing the byte value in one of a plurality of regions (storing APS K3 byte in the second column of the STS-2 signal) of a unified memory (row 5 of the transport overhead, see Fig. 7), each of the plurality of regions (STS-1, STS-2, STS-3, see Fig. 7) corresponding to one of a plurality of signaling channels (each region corresponds to a different STS signal, namely STS-1, STS-2, STS-3 signals, respectively, see Fig. 7) including the signaling channel of the byte value (including STS-2 signal for the APS K3 byte, see Fig. 7); and

loading the byte value from the respective region of the unified memory into an interface buffer (loading K3 byte value into the interface buffer of Fig. 9, see Fig, 9; note that the

combination of Node ID for K1 and Node ID of K2 is interpreted as an interface buffer) corresponding to the respective region (K3 byte corresponding to the fifth row of the second STS-2 signal, see Fig. 7) as part of a burst operation in which a plurality of additional byte values from the respective region (K1 byte of the second STS-1 signal in the second column of the transport overhead and K2 byte of the third STS-1 signal in the third column of the transport overhead, see Fig. 7) are also loaded into the interface buffer, said interface buffer being one of a plurality of interface buffers (the combination of Node ID for K1 and Node ID of K2 is interpreted as an interface buffer and the last byte representation of K3 byte is interpreted as another interface buffer) corresponding to the plurality of regions (each of K1, K2, K3 bytes corresponds to a different region in the transport overhead, see Fig. 7), each of the plurality of interface buffers being loaded by the burst operation in a cyclical manner from respective regions of the unified memory (see col. 7, lines 34-51 and Fig. 7).

Regarding claim 10, Bisson further discloses the method of claim 9 wherein locating the particular unused byte location comprises:

identifying a particular row, column, and plane in the SONET frame (locating the unused byte portions by identifying the fifth row, second column of the transport overhead from the second STS-1 signal in the STS-3 SONET frame, see col. 7, lines 22-26 and Fig. 3).

Regarding claim 11, Bisson discloses the method of claim 10 wherein identifying the particular row, column, and plane is with respect to one of a boundary (transport overhead boundary) of the SONET frame and a boundary of a synchronous payload envelope (SPE) within

the SONET frame (locating the unused byte portions by identifying the fifth row, second column of the transport overhead boundary from the second STS-1 signal in the STS-3 SONET frame, see col. 7, lines 22-26 and Fig. 3).

Regarding claim 12, Bisson discloses the method of claim 9 wherein the unused byte location comprises a byte location in one of a section overhead portion of the SONET frame, a line overhead portion of the SONET frame (locating the unused byte portion for the APS channel K3 byte at the fifth row, second column of the line overhead, see col. 3, lines 6-15 and col. 4, lines 8-16; note that the fifth row lies in the line overhead portion of the transport overhead), and a path overhead portion of a synchronous payload envelope (SPE) within the SONET frame.

Regarding claim 13, Bisson discloses a method comprising:

receiving a synchronous optical network (SONET) frame (receiving a K3 byte from the APS signaling channel, see col. 3, lines 6-15; APS signaling stands for automatic protection switching signaling, see col. 6, lines 24-25);

locating a particular byte location within an overhead portion of the SONET frame that is unused for SONET purposes (locating the fifth row and second column of the transport overhead of the second STS-1 SONET frame, see col. 3, lines 6-15),

wherein locating the particular byte location comprises switching to an interface buffer (column 2 of transport overhead, see Fig. 7) storing the byte value when the particular unused byte location is available to be written (locating the unused byte location at the fifth row, second column of the second STS-1 signal and fifth row, third column of the third STS-1 signal in the

transport overhead of the SONET frame, respectively, see Fig. 7), said interface buffer (column 2 of transport overhead, see Fig. 7) being one of a plurality of interface buffers (columns 1, 2, 3 of transport overhead, see Fig. 7) corresponding to a plurality of signaling channels (row 5 of the transport overhead corresponds to a plurality of signals STS-1, STS-2, STS-3, see Fig. 7), said plurality of interface buffers being switched to match the plurality of signaling channels (STS-1, STS-2, STS-3 signals) to corresponding byte locations at a data rate of a SONET service (each of STS-1 and STS-3 signals corresponds to signals of different line rates, see col. 4, lines 58-67) comprising the SONET frame (STS-3 SONET frame, see col. 7, lines 15-33 and Fig. 7); and

inserting the byte value from the signaling channel (APS channel) into the particular unused byte location (APS channel byte K3 is allocated to the unused byte portions of the transport overhead, col. 3, lines 6-15); and

capturing a byte value from the particular byte location, said byte value comprising a signaling channel (the four most significant bits in the new K3 byte are captured to expand the K1 byte node identification and the least four significant bits in the K3 byte are captured to expand the K2 byte node identification, see col. 7, lines 33-38 and Fig. 9).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bisson.

Regarding claim 5, Bisson discloses the method of claim 9 further comprising:

receiving a plurality of additional byte values from the signaling channel (receiving APS channel K1 and K2 bytes from the APS channel, see col. 3, lines 6-15);

Bisson does not explicitly show locating the particular unused byte location within the overhead portion of a plurality of additional SONET frames and inserting the plurality of additional byte values from the signaling channel into the particular unused byte location in respective ones of the plurality of additional SONET frames.

However, Bisson discloses locating the particular unused byte location within the overhead portion of a SONET frame (locating the unused portions for the K1 byte from the fifth row of the second STS-1 signal and for the K2 byte from the fifth row of the third STS-1 signal within the transport overhead of the STS-3 frame, see Fig. 7); and the use of two successive STS-1 frames (see col. 3, lines 33-34 and Fig. 2). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of locating particular byte location and inserting byte value into particular unused byte value location in Bossin such that locating the particular unused byte location is within the overhead portion of a plurality of additional SONET frames and inserting the plurality of additional byte values from

the signaling channel into the particular unused byte location is in respective ones of the plurality of additional SONET frames. The motivation to do so is to keep the arrangement of APS channel K1 and K2 bytes of each STS-1 frame more organized when inserting into the corresponding unused byte locations of the transport overhead of each STS-1 frame because APS K1 and K3 bytes of one STS-1 frame would not be mixed up with those K1 and K3 bytes of another STS-1 frame.

5. Claims 7, 14-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bisson in view of Nakabayashi (USP 5,901,137).

Regarding claims 7 & 14, Bisson discloses all the aspects of the claimed invention set forth in the rejection of claim 9 above. Bisson further discloses locating the particular byte location comprises switching to an interface buffer (column 2 of transport overhead, see Fig. 7) storing the byte value when the particular unused byte location is available to be written (locating the unused byte location at the fifth row, second column of the second STS-1 signal and fifth row, third column of the third STS-1 signal in the transport overhead of the SONET frame, respectively, see Fig. 7), said interface buffer (column 2 of transport overhead, see Fig. 7) being one of a plurality of interface buffers (columns 1, 2, 3 of transport overhead, see Fig. 7) corresponding to a plurality of signaling channels (row 5 of the transport overhead corresponds to a plurality of signals STS-1, STS-2, STS-3, see Fig. 7), said plurality of interface buffers being switched to match the plurality of signaling channels (STS-1, STS-2, STS-3 signals) to corresponding byte locations at a data rate of a SONET service (each of STS-1 and STS-3

signals corresponds to signals of different line rates, see col. 4, lines 58-67) comprising the SONET frame (STS-3 SONET frame, see col. 7, lines 15-33 and Fig. 7); and

inserting the byte value from the signaling channel (APS channel) into the particular unused byte location (APS channel byte K3 is allocated to the unused byte portions of the transport overhead, col. 3, lines 6-15).

Bisson does not explicitly show that the method of claim 9 wherein locating the particular unused byte location is programmable and that a machine accessible medium having stored thereon machine executable instructions that when executed implement the method of claim 9.

However, Nakabayashi discloses that an APS receiver in which an intermediate node determination processor, implemented by means of program control, is provided with an APS byte memory for storing received APS bytes (see col. 4, lines 45-49 and Fig. 5). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of locating the unused byte location of Bisson with the APS processor of Nakabayashi such that the method of locating the unused byte location is programmable such as the APS intermediate node determination processor taught by Nakabayashi. The motivation to do so is to provide the program instructions to implement the method of locating the unused byte locations in the transport overhead of a SONET frame because software code needs to be programmed to perform the method taught by Bisson.

Regarding claim 15, Bisson discloses a method comprising:

receiving a synchronous optical network (SONET) frame (receiving a K3 byte from the APS signaling channel, see col. 3, lines 6-15; APS signaling stands for automatic protection switching signaling, see col. 6, lines 24-25);

locating a particular byte location within an overhead portion of the SONET frame that is unused for SONET purposes (locating the fifth row and second column of the transport overhead of the second STS-1 SONET frame, see col. 3, lines 6-15), and capturing a byte value from the particular byte location, said byte value comprising a signaling channel (the four most significant bits in the new K3 byte are captured to expand the K1 byte node identification and the least four significant bits in the K3 byte are captured to expand the K2 byte node identification, see col. 7, lines 33-38 and Fig. 9),

wherein locating the particular byte location comprises switching to an interface buffer (column 2 of transport overhead, see Fig. 7) storing the byte value when the particular unused byte location is available to be written (locating the unused byte location at the fifth row, second column of the second STS-1 signal and fifth row, third column of the third STS-1 signal in the transport overhead of the SONET frame, respectively, see Fig. 7), said interface buffer (column 2 of transport overhead, see Fig. 7) being one of a plurality of interface buffers (columns 1, 2, 3 of transport overhead, see Fig. 7) corresponding to a plurality of signaling channels (row 5 of the transport overhead corresponds to a plurality of signals STS-1, STS-2, STS-3, see Fig. 7), said plurality of interface buffers being switched to match the plurality of signaling channels (STS-1, STS-2, STS-3 signals) to corresponding byte locations at a data rate of a SONET service (each of

STS-1 and STS-3 signals corresponds to signals of different line rates, see col. 4, lines 58-67) comprising the SONET frame (STS-3 SONET frame, see col. 7, lines 15-33 and Fig. 7); and

capturing a byte value from the particular byte location, said byte value comprising a signaling channel (the four most significant bits in the new K3 byte are captured to expand the K1 byte node identification and the least four significant bits in the K3 byte are captured to expand the K2 byte node identification, see col. 7, lines 33-38 and Fig. 9).

Bisson does not explicitly show a machine accessible medium having stored thereon machine executable instructions that when executed implement the aforementioned method.

However, Nakabayashi discloses that an APS receiver in which an intermediate node determination processor, implemented by means of program control, is provided with an APS byte memory for storing received APS bytes (see col. 4, lines 45-49 and Fig. 5). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of locating the unused byte location of Bisson with the APS processor of Nakabayashi such that the method of receiving, locating and capturing a byte value from a particular byte location is performed by machine executable instructions such as the program control in the APS intermediate node determination processor taught by Nakabayashi. The motivation to do so is to provide the program instructions to implement the method of receiving, locating, and capturing the byte value in the transport overhead of a SONET frame because both hardware and software are required to perform the method taught by Bisson.

Regarding claim 16, Bisson discloses all the aspects of the claimed invention set forth in the rejection of claim 1 above, including the method of insertion logic to receive a byte value from a signaling channel (receiving a K3 byte from the APS signaling channel, see col. 3, lines 6-15; APS signaling stands for automatic protection switching signaling, see col. 6, lines 24-25), locate a particular unused byte location within an overhead portion of a synchronous optical network (SONET) frame (locating the fifth row and second column of the transport overhead of the second STS-1 SONET frame, see col. 3, lines 6-15), and insert the byte value from the signaling channel into the particular unused byte location (APS channel byte K3 is allocated to the unused byte portions of the transport overhead, col. 3, lines 6-15),

insert the byte value from the signaling channel (APS channel) into the particular unused byte location (APS channel byte K3 is allocated to the unused byte portions of the transport overhead, col. 3, lines 6-15); and

wherein locating the particular byte location comprises switching to an interface buffer (column 2 of transport overhead, see Fig. 7) storing the byte value when the particular unused byte location is available to be written (locating the unused byte location at the fifth row, second column of the second STS-1 signal and fifth row, third column of the third STS-1 signal in the transport overhead of the SONET frame, respectively, see Fig. 7), said interface buffer (column 2 of transport overhead, see Fig. 7) being one of a plurality of interface buffers (columns 1, 2, 3 of transport overhead, see Fig. 7) corresponding to a plurality of signaling channels (row 5 of the transport overhead corresponds to a plurality of signals STS-1, STS-2, STS-3, see Fig. 7), said plurality of interface buffers being switched to match the plurality of signaling channels (STS-1, STS-2, STS-3 signals) to corresponding byte locations at a data rate of a SONET service (each of

STS-1 and STS-3 signals corresponds to signals of different line rates, see col. 4, lines 58-67) comprising the SONET frame (STS-3 SONET frame, see col. 7, lines 15-33 and Fig. 7); and

Bisson does not explicitly show an apparatus for performing this insertion logic method. However, Nakabayahsi discloses an APS receiver in which an intermediate node determination processor, implemented by means of program control, is provided with an APS byte memory for storing received APS bytes (see col. 4, lines 45-49 and Fig. 5). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of locating the unused byte location of Bisson with the APS processor of Nakabayashi such that the method of receiving, locating, and inserting APS signaling channel bytes is performed by the APS receiver such as the APS intermediate node determination processor taught by Nakabayashi. The motivation to do so is to provide an apparatus to implement the method of receiving, locating, and inserting APS signaling channel bytes into the transport overhead of a SONET frame because a processor comprising software code are required to provide the instructions to perform the method taught by Bisson.

Regarding claim 17, Bisson further discloses the apparatus of claim 16 further comprising:

a unified memory (row 5 of the transport overhead, see Fig. 7) to store the byte value in one of a plurality of regions within the unified memory (storing APS K3 byte in the second column of the STS-2 signal; note that fifth row, columns 1, 2, 3 of the transport overhead are interpreted as the regions), each of the plurality of regions corresponding to one of a plurality

of signaling channels including the signaling channel of the byte value (each region corresponds to a different STS signal, namely STS-1, STS-2, STS-3 signals, respectively, see Fig. 7); and

an interface buffer (see Fig. 9) to couple the unified memory (see Fig. 7) to the insertion logic (see col. 7, lines 33-38), said interface buffer to be loaded with the byte value from the respective region of the unified memory (loading K3 byte value into the interface buffer of Fig. 9, see Fig, 9; note that the combination of Node ID for K1 and Node ID of K2 is interpreted as an interface buffer).

Regarding claim 18, Bisson further discloses the apparatus of claim 17 wherein the interface buffer is loaded as part of a burst operation in which a plurality of additional byte values from the respective region are also loaded into the interface buffer (K1 byte of the second STS-1 signal in the second column of the transport overhead and K2 byte of the third STS-1 signal in the third column of the transport overhead, see Fig. 7), said interface buffer being one of a plurality of interface buffers (the combination of Node ID for K1 and Node ID of K2 is interpreted as an interface buffer and the last byte representation of K3 byte is interpreted as another interface buffer) corresponding to the plurality of regions within the unified memory (each of K1, K2, K3 bytes corresponds to a different region in the transport overhead, see Fig. 7), each of the plurality of interface buffers being loaded by the burst operation in a cyclical manner from respective regions of the unified memory (see col. 7, lines 34-51 and Fig. 7).

Regarding claim 19, Bisson discloses an apparatus comprising:

receive a synchronous optical network (SONET) frame (receiving a K3 byte from the APS signaling channel, see col. 3, lines 6-15; APS signaling stands for automatic protection switching signaling, see col. 6, lines 24-25), locate a particular byte location within an overhead portion of the SONET frame that is unused for SONET purposes (locating the fifth row and second column of the transport overhead of the second STS-1 SONET frame, see col. 3, lines 6-15), and capture a byte value from the particular byte location, said byte value comprising a signaling channel (the four most significant bits in the new K3 byte are captured to expand the K1 byte node identification and the least four significant bits in the K3 byte are captured to expand the K2 byte node identification, see col. 7, lines 33-38 and Fig. 9).

Bisson does not explicitly disclose an apparatus with an extraction logic to perform the functions mentioned above.

However, Nakabayashi discloses an APS receiver in which an intermediate node determination processor, implemented by means of program control, is provided with an APS byte memory for reading APS bytes from the APS bytes memory (see col. 4, lines 45-49 and Fig. 5). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of locating the unused byte location of Bisson with the APS processor of Nakabayashi such that the method of receiving, locating, and capturing APS signaling channel bytes is performed by the APS receiver such as the APS intermediate node determination processor taught by Nakabayashi. The motivation to do so is to provide an apparatus to implement the method of receiving, locating, and capturing APS signaling channel

bytes of a SONET frame because a processor comprising software code are required to provide the instructions to perform the method taught by Bisson.

Response to Arguments

6. Applicant's arguments with respect to claims 2-19 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Mew whose telephone number is 703-305-5300. The examiner can normally be reached on 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 703-305-4366. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

WELLINGTON CHIN
VISORY PATENT EXAMIN

KDM
Art Unit 2664